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PATENTED JAN. 8, 1907.

R. A. MAY.  
FIRE POT FOR STOVES OR FURNACES.  
APPLICATION FILED FEB. 10, 1906.

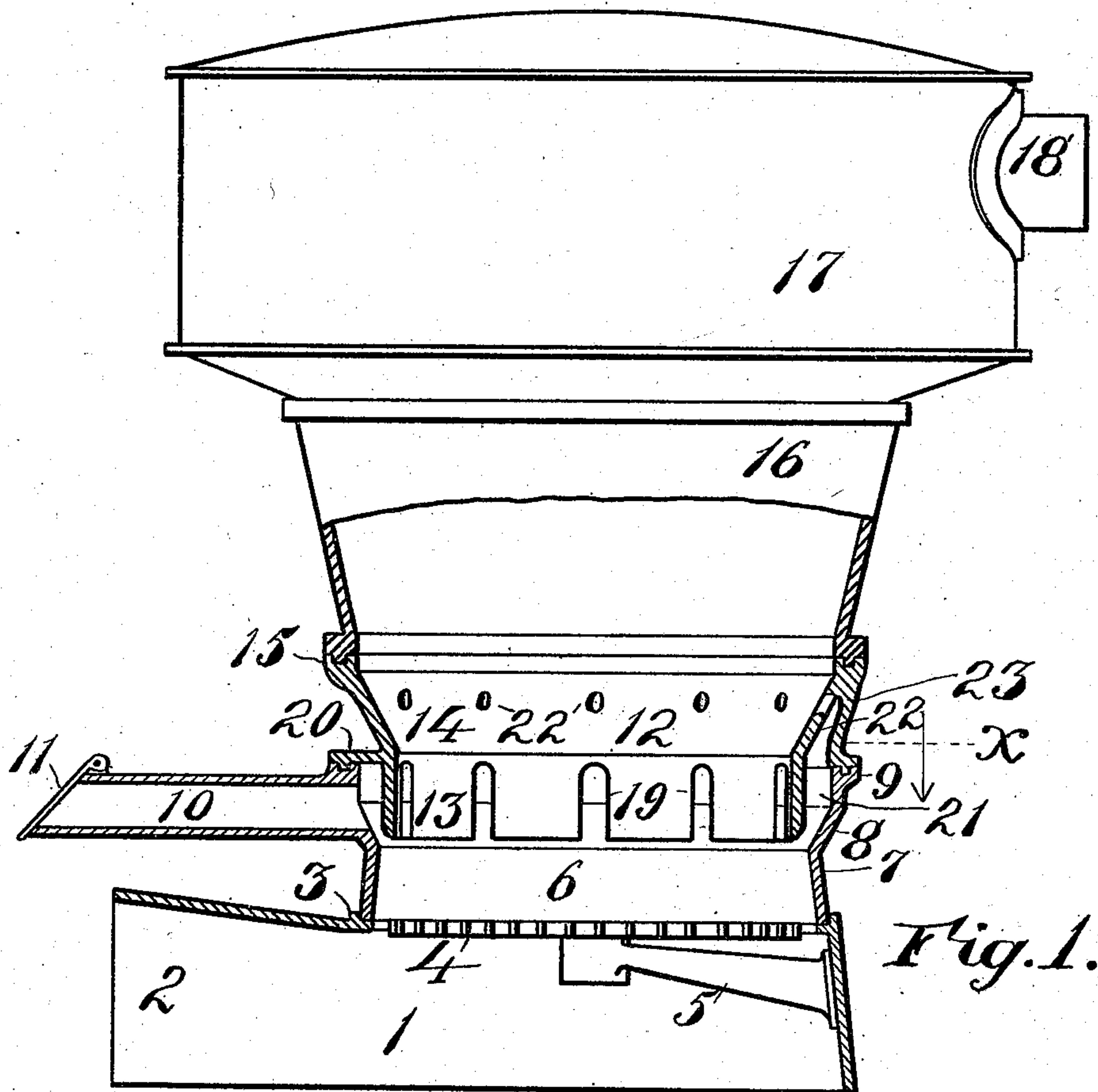


Fig. 1.

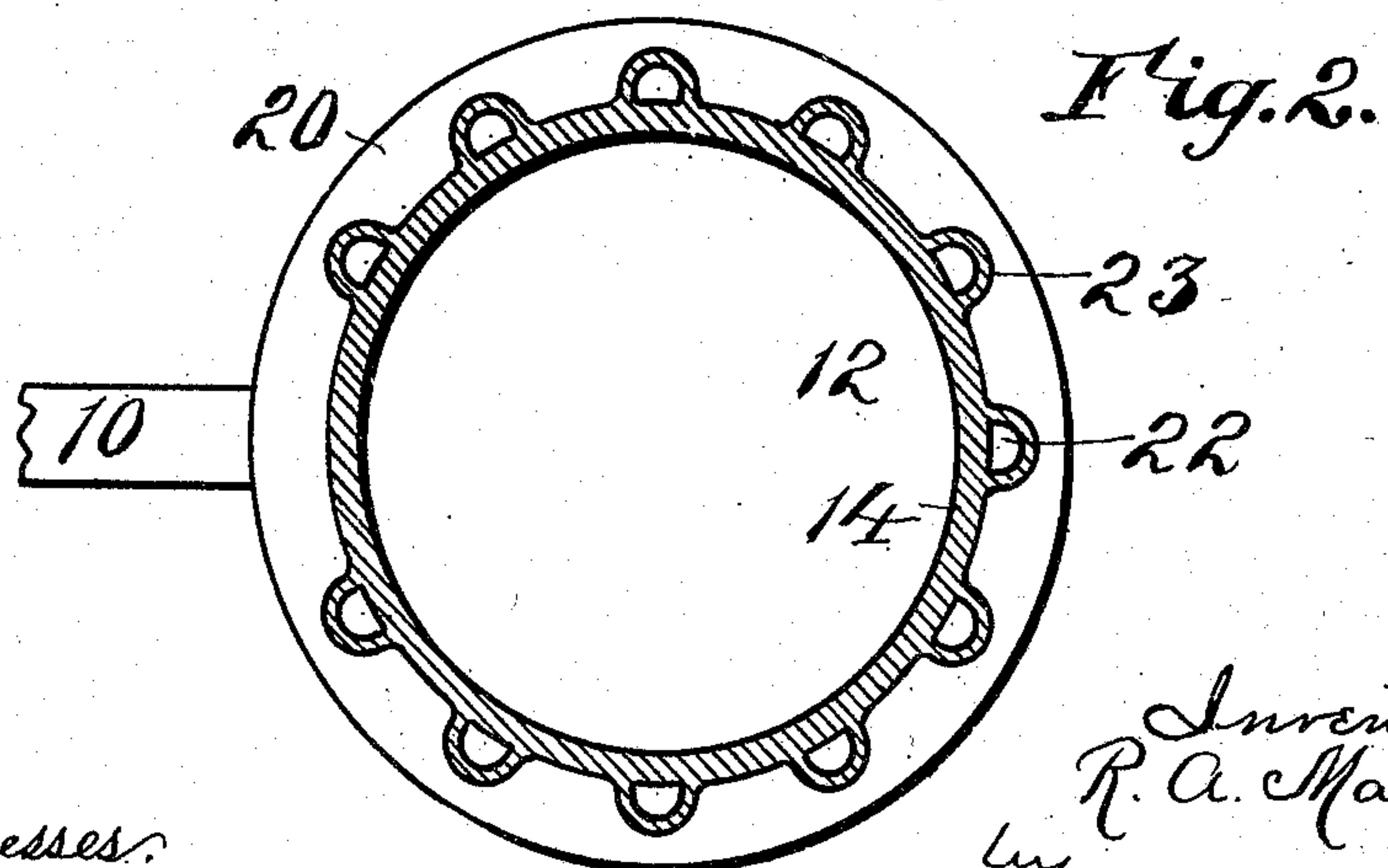


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

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## FIRE-POT FOR STOVES OR FURNACES.

No. 840,641.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed February 10, 1906. Serial No. 300,444.

*To all whom it may concern:*

Be it known that I, RUDOLF A. MAY, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented new and useful Improvements in Fire-Pots for Stoves or Furnaces, of which the following is a specification.

My invention has relation to fire-pots for stoves or furnaces; and the object thereof is to provide a fire-pot of a novel form having a new and improved means for supplying oxygen to the fuel contained therein and which will be simple in construction, durable and economical in operation, and which is capable of being readily placed in position for use and easily taken apart for cleaning or repairs.

With the foregoing and other objects in view my invention consists of the novel construction, combination, and arrangement of parts constituting the invention to be hereinafter referred to and illustrated in the accompanying drawings, which form a part of this specification, in which is shown the preferred embodiment of the invention; but it is to be understood that changes, variations, and modifications can be resorted to which come within the scope of the claim hereunto appended.

In the drawings, in which similar reference-numerals indicate like parts in the different figures, Figure 1 is a side elevation of the heater portion of a furnace embodying my invention with the fire-pot and ash-pit in section to better illustrate the internal construction thereof, and Fig. 2 is a section of the fire-pot on line X of Fig. 1.

The description which hereinafter follows will be confined specifically to the fire-pot of a furnace as being better to illustrate my invention, although my improved device may be used equally well in connection with stoves.

In the drawings, 1 represents the ash-pit of the device provided with the ordinary inlet 2. This ash-pit is provided in its upper portion with an opening surrounded by a beading 3. Within this opening bounded by the beading 3 is placed a grate 4 of any desired or preferred construction, and I have shown this grate supported by means of an arm 5, attached to the interior wall of the ash-pit, although any other means for sustaining it may be employed.

Mounted on the ash-pit 1 and registering with the opening inclosed by the beading 3

is the lower member 6 of my improved fire-pot. This member 6 may be constructed with cylindrical walls, if desired; but I prefer to make it inwardly and upwardly converging at the bottom at the point designated in the drawings by the reference-numeral 7, and from thence outwardly-flaring at the point designated by the reference-numeral 8, and from there preferably cylindrical and terminating in an annular seat 9, provided with a groove to receive the other member of the fire-pot.

Arranged to connect with the interior of the member 6 is an inlet-pipe 10, closed by an ordinary door 11, by which air is admitted to the interior of the fire-pot. Mounted on the member 6 is the upper or secondary member 12 of my improved fire-pot, and while its side wall may be made cylindrical I prefer to make it in the shape shown in the drawings, wherein the lower portion (designated by the reference-numeral 13) is cylindrical and the upper portion (designated by the reference-numeral 14) is outwardly and upwardly flaring. The upper part of this member 12 is provided with an annular seat 15, having a groove in which is seated the fuel section 16 of the furnace, which in turn supports the radiator 17, from which leads an offtake-pipe 18, by which the products of combustion from the fire-pot are conveyed to the chimney. The lower or cylindrical portion 13 of the member 12 is provided with a plurality of upwardly-extending slots 19, which divide the lower portion thereof into a series of teeth, which serve to retain the fuel centrally in the fire-pot while permitting the ingress of air or oxygen through the slots 19 to aid in the combustion which takes place in this member. This member 12 is provided exteriorly with an annular and preferably integral flange 20, the outer portion of which is arranged to enter and seat in the groove in the annular seat 9 of the member 6, and thereby sustain the member 12 in a definite position. The exterior diameter of the cylindrical portion 13 of the member 12 is much smaller than the interior diameter of the portions 8 and 9 of the member 6, so that an annular space 21 exists around the portion 13 of the member 12.

In constructing the member 12 of the fire-pot I prefer to core a series of openings in the side walls thereof, (designated in the drawings by the reference-numeral 22.) The lower portions of these openings 22 are in



open communication, through the flange 20, with the air-space 21, which exists between the members 6 and 12. The upper portions of these openings 22 are in open communication with the interior of the member 12. In forming these openings 22 I prefer to form ribs (designated in the drawings by the reference-numeral 23) on the exterior of the body of the member 12 and preferably integral therewith, and in these ribs are cored the openings 22. Of course it will be obvious that these openings 22 may extend upwardly and enter the interior of the fire-pot at any distance above the bottom thereof which the exigencies or fancies of the maker of the device may deem best.

In using a stove or furnace embodying this invention the fire is kindled on the grate 4 in the ordinary manner, and the supply of oxygen to the fire-pot is obtained by opening the gate 11, which permits air to enter the pipe 10 and from thence pass around the annular space 21 and from thence through the slots 19 to the middle portion of the fire-pot, while at the same time the air will pass upwardly through the openings 22 and enter the fire-pot at a higher point, and thus the distribution of oxygen to the combustion-chamber of the device is more even than where it is permitted to enter entirely through the ash-pit and pass upwardly through the ashes and fuel contained on the grate 4.

What I claim, and desire to secure by Letters Patent, is—

35 A stove or furnace comprising an ash-pit provided with an opening for establishing communication between the ash-pit and the fire-pot, a grate mounted in said opening, an annular member mounted upon the ash-pit

and having the lower portion thereof substantially conoidal in contour, its intermediate portion of inverted-cone shape, and its upper portion cylindrical, an inlet-pipe formed integral with the upper and intermediate portions of said annular member, a second annular member having the lower portion thereof substantially cylindrical in contour and its upper portion of inverted-cone shape, said lower portion of said second member of less diameter than the upper and intermediate portions of said first member and surrounded by said upper and intermediate portions of said first member forming thereby an air-space between said lower portion of the second member and said upper and intermediate portions of the lower member, said lower portion of said second member provided with a plurality of upwardly-extending slots, said upper portion of said second member provided with a plurality of openings, a laterally-extending flange formed integral with the lower portion of said second member and extending upon the upper portion of the lower member and adapted to support the upper member upon the lower member, and a plurality of conduits formed integral with said flange and with the upper portion of said second member and adapted to establish communication between said air-space and said openings.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RUDOLF A. MAY.

Witnesses:

C. E. HUMPHREY,  
GLENARA FOX.